# SMEs' perceptions regarding strategic and structural entry barriers

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## Abstract

Extant literature discusses a large number of different entry barriers that may hamper market efficiency or entrepreneurial activity. In practice several of these barriers cohere and stem from the same root. Factor analysis is used to identify the underlying dimensions of these barriers. 7 generic factors have been found that drive the system. In the literature a debate exists between scholars that stress the importance of structural and/or strategic barriers. This paper shows that in the perception of firms both types of barriers are important and argues that the effectiveness of strategic barriers depends on attributes of the market structure. Based on the seven generic factors, a conjoint analysis is carried out to identify the most important factors perceived by firms. The conjoint analysis shows that in particular the barriers rooted in three underlying dimensions require attention of market authorities as they may refrain new entrants from entry: finance, access to distribution channels and strategic action. Remarkably, government rules and regulations, product differentiation, R&D and advertising constitute a minor entry problem according to the firms.

## Introduction[i]

Small firms and in particular new firms, serve as agents of change (Audretch, 2006; Acs and Storey, 2004). Entries of new innovative firms foster the dynamics in the economy. Simultaneously, newcomers may have an equilibrating function, as firms will enter the market if profits are above the long-run competitive level. The upshot is that entry contributes to allocative as well as dynamic efficiency in the market (Audretch and Thurik, 2001). However, entry barriers can prevent firms from entering the market and hamper the process of allocative and dynamic efficiency. In line with this perspective it is easily understood that barriers to entry constitute an important issue in entrepreneurship and competition policy. In the framework of competition policy market authorities control the behaviour of firms in specific markets and may impose sanctions if market power is abused. A related issue, that may be raised in the framework of entrepreneurship policy, concerns the question whether entry barriers restrict the activities of potential entrepreneurs in the modern economy. Is it an incidental problem related to specific sectoral characteristics or is it a more general phenomenon that hampers entrepreneurial activity in the economy at large?

The latter issue is relevant for policy makers as quite a body of literature shows that there is a positive relationship between entrepreneurial activity and national economic growth in developed countries (van Stel et al., 2005, Acs and Storey, 2004). In the Netherlands, a country neither among the laggards nor among the top dogs of entrepreneurial activity, this resulted in a debate among politicians and policy makers on policies to encourage entrepreneurship. In the debate two reasons are given to explain the mediocre position of the Netherlands: existing 'entry barriers' and/or a deficient 'entrepreneurial attitude'. The first phenomenon is related to characteristics of the industries or a lack of servicing industries (e.g. access to credit and venture capital), while the second phenomenon is more related to psychological and cultural factors and alternative opportunities in the labour market. This paper aims at investigating the importance of different entry barriers in the Dutch economy. If vigorous barriers are detected they will at least partly account for the somewhat disappointing level of entrepreneurial activity in the Netherlands.

A large body of literature discusses a variety of entry barriers (see e.g. Shepherd, 1997; Karakaya & Stahl, 1989). Blees *et al.* (2003) identified 37 barriers to entry on the basis of a comprehensive literature study. As some of these barriers seem to overlap, two questions arise. Firstly, one may question whether all these barriers are important. Secondly, it is interesting to verify whether these barriers are driven by a reduced set of underlying factors. Some research has been done in this respect (Karakaya, 2002; Karakaya and Stahl, 1989). A major flaw in this work is that it only concerns manufacturing industries (larger firms). Moreover, Karakaya (2002) mainly addresses structural entry barriers and is based on a relatively small number of observations.

Several authors stress the need for empirical evidence on extant barriers to entry (Scherer, 1988; Geroski *et al.*, 1990; Geroski, 1995; Bunch and Smiley, 1992; Karakaya, 2002). This paper addresses the firm's perceptions with regard to entry barriers. Considering the difficulties of carrying out empirical research on entry barriers and in particular on strategic entry barriers, we decided to interview firms and measure their perception regarding the importance of a specific entry barrier. As our study is mainly interested in those barriers that refrain potential entrants to enter an industry, perceptions regarding entry barriers are key. Subjective opinions of business owners influence both growth motivation and direct behaviour (Davidsson, 1991). Several researchers followed the same line of thought (Bunch and Smiley, 1992; Singh, Utton & Waterson, 1998; Karakaya, 2002, Aidis, 2005). However, all these studies focused on a limited subset of entry barriers or a specific group of companies or industries. Some researchers stress the importance of strategic barriers (Scherer, 1988; Bunch and Smiley, 1992), while others emphasize the role of structural barriers (Bain, 1956; Karakaya, 2002). In line with this a limited set of predetermined structural and/or strategic barriers were analyzed.

For this study it was important to interview a large number of firms, representative for the Dutch economy, and to include all potential barriers identified in the literature study (Blees at al., 2003). Our sample encompasses the services and manufacturing sectors and involves, in line with the size distribution of firms in the economy, mainly SMEs. First we asked the firms to what extent the specific barriers mentioned in the literature occur in their markets of operation. Subsequently, factor analysis was used

to identify the latent variables that drive the perceptions of the respondents. The large number of structural and strategic entry barriers included in our survey provides a proper basis to assess the existence of the underlying dimensions. Moreover, it can be verified whether strategic barriers are grouped in new latent variables separated from structural barriers or that structural and strategic barriers are driven by the same latent variable. Finally, a conjoint analysis is carried out to assess the importance of these underlying dimensions, i.e. to identify the most (un)attractive market situation and the most vigorous entry barriers (factors). This part of the study shows which entry barriers really affect entry decisions. In a quasi-experimental setting different profiles of markets, containing different sets of entry barriers, were presented to the firms and they were asked to rank the attractiveness of those markets.

The next Section starts with a concise overview of the literature on entry barriers. The concept is defined and the method to measure the importance of entry barriers is discussed in Section 3. Subsequently the findings are discussed. Section 4 presents the perceptions of firms regarding existing barriers. The underlying factors are identified in Section 5 and Section 6 discusses the results of the conjoint analysis. Section 7 concludes.

## 2. Literature review

Two traditions can be distinguished in the literature on entry barriers: the Industrial Organization perspective (e.g. Bain, 1956; Stigler, 1968; Von Weizsacker, 1980) and the Strategic Management perspective (e.g. Porter 1980, 1985; Singh *et al*., 1998, Robinson *et al.,* 2001).

The first tradition focuses on the industry as the unit of analysis, strives for efficiency and identifies harmful barriers for economic development. Various models show how entry barriers affect the behaviour of firms and the performance of the industry. Basically, two types of barriers are distinguished: structural and strategic barriers to entry. The structural barriers stem from market structure characteristics and are widely discussed in the tradition of Industrial Organisation. Bain (1956) introduced the concept of 'barriers to new competition'. This concept is based on the assumption that competition is key in the operation of industries and that any artificial barrier to

competition may reduce the efficient allocation of resources in the industry. Bain stressed the importance of structural characteristics that hamper market entry of potential competitors: economies of scale, technological advantages, absolute cost advantages, etc. According to Bain the resulting competitive forces would determine the behavior of firms and market performance. This deterministic approach has been criticized within the discipline of Industrial Organisation. By the late 1970s these views became known as the 'The New Industrial Organisation' (Geroski et al.,1990). They stressed the importance of behaviour as a determinant for market performance and market structure (in the long run). The approach comes close to the tradition of strategic management as behavioural aspects are considered to be key. However, in line with the tradition of Industrial Organisation, the unit of analysis is the industry.

The Chicago School (Stigler, 1968) contributed to the debate on barriers to entry by stressing the importance of costs asymmetry between incumbents and potential entrants: The research should not focus on supernormal profits but on the question whether the conditions of entry for the incumbents were less difficult than for the new entrants. The importance of this argument becomes clear when the advantages of economies of scale are interpreted. According to the Chicago School, scale economies do not represent a barrier to entry if they imply penalties for companies operating at sub-optimal levels of production. Another approach that stems from this tradition focuses on the welfare effects and defines barriers to entry as a difference in cost structures which provokes a distortion in the use of economic resources from a social point of view. The latter argument is put forward by Von Weizsacker (1980) to justify interventionist public policies.

A discussion of the specific properties of these different approaches within the Industrial Organisation perspective is beyond the scope of this paper (see e.g. McAfee et al., 2004). However, it is important to understand that the different approaches lead to different definitions of entry barriers. We conclude that Bain's perspective has the broadest scope that suits our problem under study, while the latter two approaches consider additional requirements in order to identify the 'real' barriers that hamper the efficient allocation of resources in the economy.

The second tradition, strategic management, takes the firm as the unit of analysis and assesses entry barriers as a resource to create competitive advantage for individual firms. This line of thought stresses the importance of strategic barriers. Following the Resource Based View (Barney, 1991, p. 99), firms are advised to 'obtain sustained competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses'. In other words, firms are encouraged to develop resources that are difficult to copy or to substitute by competitors (Rangone, 1999, Dollinger, 2003). These so-called strategic resources form the basis for a sustainable competitive advantage. The upshot is that it is in the interest of incumbent firms to develop strategies that reduce the competitive forces in the market.

From a resource based perspective entry barriers are considered as resources for incumbent firms. Strikingly, from the perspective of Industrial Organization, this resource constitutes a potential danger as it may hamper the allocative and dynamic efficiency of the industry. The contradictory assessment of the value of barriers to entry is related to the unit of analysis and the role competition is expected to play in the two traditions. At the firm level it is indeed important to strive for a sustainable competitive advantage and to exploit available barriers.

Porter (1980: 9-13) does not define the concept but specifies seven major sources of barriers to entry: economies of scale, product differentiation, capital requirements, switching costs, access to distribution channels, cost disadvantages independent of scale and government policy. Implicitly he uses a broad definition for barriers to entry in order to encompass the barriers that result from strategic behaviour. He provides a kind of typology of barriers to entry that firms should take into account when their competitive strategy is developed. Porter's specification also shows that structural and strategic barriers are related. The barrier may be rooted in the market structure, but this will encourage firms to react strategically. For example, advertising can be considered as a structural phenomenon in the automobile industry, however, each actor may develop its own advertising strategy (brand) that affects new competitors. This shows that most structural barriers may have a strategic component too.

Therefore, the focus of this article is not only to understand the importance of structural and strategic barriers, but also to analyse to what extent the barriers cohere.

The aim of this discussion is not to identify the right tradition. Both approaches may be relevant and the proper choice depends on the problem under study. We recall that the objective of this research is to identify important entry barriers as perceived by firms (Yip, 1982; Karakaya and Stahl, 1989; Singh *et al*., 1998; Smiley, 1988). The unit of analysis is the firm. It aims at recognising the major constraints that hamper firms in making their entry decision. Therefore, a broad definition of entry barriers, encompassing all relevant associations made by firms, is adopted for this research.

## 3. Definition of concepts and data collection

A useful definition for this research is found in Besanko et al. (2007, p 289): 'Barriers to entry are those factors that allow incumbent firms to earn positive economic profits, while making it unprofitable for newcomers to enter the industry'. Two types of barriers are distinguished. Structural barriers concern natural cost or marketing advantages resulting from market characteristics that are exogenous to the firm in the short and medium-term. Strategic barriers result from a firm's behaviour and concern entry deterring strategies.

As the concepts involved are sometimes difficult to circumscribe in unambiguous questions a pilot study has been carried out in November 2004, in which 40 students participated. The students tested the survey and were asked to write about 100 case studies of the companies they interviewed. The case studies have allowed us to grasp the functioning of the perceived barriers to entry in the different industries under study and, therefore, have facilitated the interpretation of the results of the questionnaire. Moreover, some questions were refined to avoid ambiguous interpretations. The final questionnaire was pre-tested by telephone with potential respondents.

A large number of structural and strategic barriers to entry were presented in the questionnaire (see Annex 1). However, not all the barriers identified in the literature study (Blees *et al*., 2003) were addressed. Time limitations and the results of the

abovementioned pilot study explain this selection. The firms were interviewed by telephone and previous experiences have shown us that it should not take more than 15 minutes. More time would affect the willingness to cooperate. Some issues were difficult to describe in an unambiguous question (e.g. causal ambiguity). The pilot study showed that it was difficult for the respondents to distinguish similar barriers (e.g. brand name and customer loyalty are related to advertising; experience advantages are part of cost advantages; government regulations are related to government licences; know how is related to level of technology and patents).

Some aspects were covered by two separate questions in order to be able to make a distinction between the importance of structural and behavioural characteristics of the barriers. For example, with regard to advertising we presented two statements: 1. Firms in the market have high expenditures for advertising and promotion (structural), 2. The products are heavily supported by advertisement and promotion in order to make entry to the market less attractive for new competitors (strategic). We claim that the listed barriers to entry in Annex 1 give an overview of the most important barriers discussed in the extant literature.

Incumbent companies were asked to indicate on a five point Likert scale to what extent new competitors would encounter the barrier in question[ii]. Ideally the survey should have addressed new and potential competitors with feasible business plans[iii]. It could be argued that the perceptions of incumbents may show some bias as these firms have surmounted existing barriers: i.e. knowing how to solve a problem makes the problem trivial. However, potential newcomers with feasible business plans are difficult to identify for two reasons. Many of these firms are in the inception phase and not yet registered formally and, therefore, difficult to trace. Even more important is that only viable start-ups should be interviewed, as only the opinion of viable firms has to be taken into account. For example, if the bank rejects a deficient business plan on solid grounds and refuses a loan application, the entrepreneur may indicate that finance is indeed a major barrier, while it would have been more appropriate to conclude that the plan was wrong. Therefore we preferred to interview incumbents as they have proven to be viable.

As we are interested in barriers (potential) entrants may face and not the behaviour of the specific incumbents per se, the questions were directed at practices in the market rather than the firm's specific behaviour. In general, the incumbents were asked to indicate how important a specific barrier is if a comparable company (same size) wants to enter the major product market in which the incumbent is operational. As barriers to entry are related to product markets and most firms manage multi-product operations, we explicitly referred to the most important product market. The advantage of this format for the question is that all companies have experience with the market and, therefore, are able to value the importance of the specific barrier.

In total 3,562 firms were contacted for the telephone survey[iv]. This resulted in 1,074 completed responses: 663 micro enterprises, 303 small enterprises and 186 medium and large enterprises (18 unknown) distributed quite equally over the sectors[v]. This signifies a response rate of 30%. Of the contacted firms, 33% refused to cooperate. Another 24% of the contacted firms could not be reached because of an answering machine, get no answer, number engaged or more than 6 attempts with no response. Finally, with 13% of the contacted firms an appointment was made but it did not result in a completed questionnaire because the targeted sample was reached. Another 96 respondents were added, as they were interviewed by our students in the pilot phase, using an identical question format for the barriers under study[vi]. In total the sample consists of 1,170 Dutch firms distributed over six industries, i.e. furniture, employment agencies, chemical industry, ICT, food (production of bread) and retail (clothing and shoes)[vii].

The aim was to collect data for approximately 175-200 firms per sector divided over three size categories: micro enterprises (< 10 employees), small enterprises (10 to < 50 employees), and medium and large enterprises (50+ employees). Per size category, the firms were selected at random from the Direct Marketing CD-database of MarketSelect[viii]. In some sectors all existing firms were contacted in the size category of 50+ employees, because of the limited number of larger firms in those sectors. Most observations are in the class of < 10 employees, or micro firms. In the retail sector, we only have five observations of firms with 50 employees or more. As the sample was drawn from a database including subsidiaries and branches of larger

firms, and responses were provided by local managers, the questions concern employment figures of the selected subsidiary. About 40% of the interviewed establishments are related to a larger company.

The MarketSelect database was used to test for non-response bias. Smaller firms were more willing to participate in the research than large firms. This holds for the total sample as well as for the sectors furniture, employment agencies, chemical industry and ICT. No significant differences related to size were found for the food industry and retail. In the food industry, firms were less willing to participate in the research compared to the other sectors, probably because of the Christmas rush.

For the final part of this study, the conjoint analysis, another group of firms (n = 137) has been interviewed by students in November 2006. In the framework of their studies they carried out a case study assignment on the entry barriers these firms were facing. The conjoint was part of the assignment. As the selected firms cover the manufacturing (somewhat under-represented) and services industries (somewhat over-represented) in the Northern region of the Netherlands it could be posited that some bias may have affected the results. However, we expect that this is unlikely as sectoral differences are limited and do not affect the ranking of the importance of the different entry barriers (Section 4). Moreover, the conjoint concerns a hypothetical market situation (Section 6) which excludes sectoral and regional differences. Most important for this sample is to make sure that only experienced businessmen are involved.

## 4. Findings: perceived entry barriers in the firms' markets

In Table 1 the perceived importance of the barriers in the markets under study is presented. Overall, *securing input* for newcomers, *collusion* among incumbents, access to *knowledge* for newcomers, *retaliation* and *knowledge* protection by incumbents are the least important barriers. According to the interviewed firms most barriers concern unimportant constraints (value lower than 3)[ix]. The mean score is 2.5 and implies that on average barriers are not perceived as major constraints: 'nearly not' or 'somewhat' important. This can be interpreted as a good sign for the Dutch economy. However, some barriers seem to play an important role: the required *sales volume* for entrants, the needed *capital* and *financial risk*

for newcomers, *behaviour* with regard to product *differentiation* by incumbents, *cost disadvantage* and *costs of capital* for newcomers.

The importance of half of the barriers under study does not differ significantly between firms of different size. However, for collusion, knowledge, retaliation, switching costs, strategic behaviour related to R&D, government policy, excess capacity, economies of scale, and strategic behaviour related to differentiation some significant differences are observed between firms of different size (5% level). The excess capacity barrier is more important in the perception of medium-sized and large firms than for micro and small firms. In a market with excess capacity, it will be more difficult for a relatively large firm to enter because it brings considerable extra capacity to the market. This finding confirms the difference that is made in theory between small-scale and large-scale entry. The barrier related to collusion is somewhat higher for micro firms. However, we note that even the average value of micro firms for the importance of this barrier is low. The scores for all other barriers with significant differences between firm size classes show that micro firms give lower values than medium and large firms. Even the value given by micro enterprises to the most important barrier (sales volume) is lower than the value given by medium and large firms. The upshot is that, on average, micro firms perceive lower barriers to entry than medium-sized and large firms. This is a surprising result as many researchers expect the opposite (see Blees et al., 2003).

In general the ranking of the importance of specific barriers to entry coheres between the sectors: securing input and collusion are of minor importance for all but two sectors (respectively retail and employment agencies), while sales volume and capital are most important for all sectors. Overall, the firms value only a few barriers as important constraints. Finance and sales volume are key issues in all sectors. However, some significant sectoral differences are observed. For instance, securing input is relatively important in retailing and knowledge is relatively important in the chemical industry (Kemp and Lutz, 2006). The ICT and furniture industry are sectors with relatively low barriers, the chemical, retail and food industry show relatively high values for the barriers under consideration.

Table 1: Perceived barriers to entry

| *Barrier to entry* | *Mean score** | *'Sectoral' differences*** | *'Scale' differences**** |
|---|---|---|---|
| 1 Securing input | 1.73 | f,b>e; f,e,i<c,r; c,b<r; i<b | Ns |
| 2 Collusion | 1.78 | f<e,b,r; e>f,c,i,b,r; c<r | MIE>SE, MLE |
| 3 Knowledge | 1.92 | f,e,i,b,r<c; e<i,b | MIE<SE, MLE |
| 4 Retaliation | 2.04 | f<e,c,b; c,b>i | MIE<MLE |
| 5 Behaviour knowledge | 2.13 | f,e,i,b,r < c | Ns |
| 6 Limit pricing | 2.25 | e,b>i,r | Ns |
| 7 Switching costs | 2.27 | f,e,b,r<c,I; | MIE<SE, MLE |
| 8 Masking profit | 2.28 | f<e,b,r | Ns |
| 9 Behaviour R&D | 2.32 | f,e,r<c,I; e<b; c>i,b | MIE<SE, MLE |
| 10 Behaviour advertising | 2.39 | f,c,i<r; e>i | Ns |
| 11 Behaviour distribution channel | 2.42 | f<e,c,i,b; e>f,c,i,b,r | MIE<MLE (P< .10) |
| 12 Government regulation | 2.52 | f,e<c,b; f,e,c,b>i; e,c,b>r; | MIE<SE, MLE |
| 13 Distribution | 2.77 | f,i,r<b; c>r | Ns |
| 14 Advertising | 2.80 | f,c,i,b<r; e>i | Ns |
| 15 Excess capacity | 2.87 | f,i,r<b | MIE, SE< MLE |
| 16 Differentiation | 3.03 | f,e<c,i,b,r | Ns |
| 17 Economies of scale | 3.15 | f>e,i,r; e,I,r<b; c>i | MIE<SE, MLE |
| 18 Costs of capital | 3.24 | f,c,i<b,r; e<b | Ns |
| 19 Cost disadvantage | 3.25 | f,e,c,i<b; e<c,r; i<r | Ns |
| 20 Behaviour differentiation | 3.33 | e,i<b | MIE<MLE |
| 21 Financial risk | 3.50 | f,e,i<b,r; c<r; c>i | Ns |
| 22 Capital | 3.53 | f,c,b,r>i; f.e,c,<b; e<r | Ns |
| 23 Sales volume | 3.84 | e<b (p<.10) | MIE < MLE (P< .10) |
| Mean score all barriers | 2.52 | f<e,c,b,r; i<c,b,r | MIE < MLE |

* *The reply options were: 1 = not at all, 2 = nearly not, 3 = somewhat, 4 = to a large extent, 5 = to a very large extent.*

** *Significant p<.05 unless otherwise indicated. f = furniture, e = employment agencies, c = chemical industries, i = ict, b = food, r = retail.*

*** *significant at p<.05 unless otherwise indicated. MIE = MIcro Enterprises, SE = Small Enterprises, MLE = Medium and Large Enterprises, Ns = not significant.*

## 5. The underlying dimensions of barriers to entry

The covariance matrix shows that the perceptions regarding several of the entry barriers strongly cohere. Therefore a factor analysis is carried out in order to verify whether some underlying latent variables drive the firms' perceptions. The co-variance matrix is non-singular. Based on the correlation matrix we obtain a KMO

value of 0.840, and the Bartlett's Test of Sphericity is significant at the 0.0005 level. This implies that the perceptions with regard to each of the barriers can be explained by the other barriers.

The determination of the number of factors is not a straightforward process. According to the method used 5, 6 or 7 factors can be distinguished[x]. We applied Kaiser's rule stating that each factor should explain at least the average variance. This method may lead to an overestimation of the number of factors (Horn, 1965). The consequences of overestimation are preferred to the consequences of a method that fails to identify separate factors (Fava and Velicer, 1996)[xi].

The factor analysis identifies 7 factors that constitute the underlying system and drive the perceptions with regard to entry barriers: finance, strategic action, R&D, product differentiation, distribution, advertising and government regulations. In total 55% of the total variation is explained by these factors. Nearly all entry barriers are strongly represented by one of the factors as, in general, the factor loadings are relatively high for only one of the identified factors (> . 60). Except for switching costs the attribution of a barrier to a specific factor is straightforward. Switching costs cohere positively with R&D and negatively with advertising. This indicates that R&D is more attractive if switching costs exist. Alternatively, advertising is less necessary if switching costs prevail or can't be created through brand loyalty programs.

Some barriers are weakly represented in several factors: securing input, economies of scale and sales volume. In particular sales volume and economies of scale require attention as the values given to these barriers were high. It may be argued that these high values result from the cumulative effect of several factors (finance, distribution, advertising, strategic action, product differentiation). McAfee et al. (2004) called these types of barriers 'ancillary barriers'. They do not constitute a barrier in itself, but reinforce other barriers to entry if they are present. Their paper discusses the example of economies of scale that reinforces the entry deterrent effects of brand loyalty and risk. However, our research results show that the values given to these specific entry barriers were generally lower than the importance given to sales volume. This indicates that sales volume is perceived as the most important barrier by firms as it reflects the cumulative effect of the identified factors. This also shows that,

even if the scores for the individual entry barriers are quite acceptable (less than 3), the combined effect of the factors can be much stronger: “Because they can interact with and magnify each other’s effects, what might seem like a fairly innocuous circumstance when regarded individually may be more problematic when the presence of other barriers is taken into account” (OECD, 2005, p. 19).

The factors government regulation, finance, and distribution can be considered as structural barriers. Three factors encompass strategic and structural elements: R&D, product differentiation and advertising. The latter result shows that strategic and structural effects cohere. Although the literature stresses the differences between the two types of barriers, practice shows that the effectiveness of strategic entry barriers is dependent on characteristics of the market structure. Specific structural attributes do not drive strategic entry barriers but are a necessary condition for the effectiveness of strategic barriers. For example, in a market for bulk products a product differentiation strategy is ineffective, but in a market with differentiated products a product differentiation strategy is key. The factor strategic action seems to resemble a pure strategic barrier. However, even for this factor it is clear that a strategy of excess capacity and retaliation can be effective only if the number of competitors is limited. This implies that the effectiveness of strategic barriers depends on attributes of the market structure.

Remarkably, despite the differences in research setup, some similarities exist with the research results of Karakaya. In these studies 3 factors in consumer goods markets (Karakaya and Stahl, 1989) and 4 factors in industrial markets (Karakaya, 2002) were identified: firm specific advantages, product differentiation, financial requirements or costs of market entry and profit expectation of entering firms. The last factor does not particularly concern an entry barrier, but rather a set of indicators for market attractiveness. The first three factors identified by Karakaya cohere with the factors identified in our study as similar entry barriers are driven by the identified underlying dimensions. A major new insight is the difference in the number of underlying dimensions and the identification of factors like strategic behaviour, R&D and government regulations. Having identified the underlying dimensions the question arises how important these different dimensions are.

Table 2: Seven factors representing the underlying dimensions[a]

| | *Barrier* | *Mean score* | *Factor1: Finance* | *Factor 2: Strategic action* | *Factor 3: R&D* | *Factor 4: Product differen-tiation* | *Factor 5: Distribu-tion* | *Factor 6: Adverti-sing* | *Factor 7: Government regulation* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Costs of capital | 3.18 | **1.012** | .197 | .077 | -.023 | .061 | .096 | -.025 |
| | Capital | 3.55 | **.918** | -.181 | .124 | .012 | .103 | .195 | .153 |
| | Financial risk | 3.40 | **.853** | .037 | .158 | .154 | .051 | .185 | .115 |
| | Cost disadvantage | 3.23 | **.758** | .191 | .068 | .138 | .038 | -.058 | .078 |
| 2 | Limit pricing | 2.15 | .209 | **.967** | -.053 | .093 | .072 | -.228 | .042 |
| | Behaviour distrib. Channel | 1.88 | -.046 | **.797** | .243 | -.009 | .532 | .372 | .043 |
| | Retaliation | 1.71 | -.006 | **.712** | .213 | .185 | .014 | .193 | .347 |
| | Excess capacity | 2.79 | .349 | **.708** | -.039 | .517 | -.117 | -.150 | .106 |
| | Masking profit | 1.97 | .060 | **.707** | .203 | .058 | .168 | .107 | -.109 |
| | Collusion | 1.45 | .032 | **.654** | .125 | -.130 | -.019 | .251 | -.017 |
| 3 | Knowledge | 1.75 | .081 | -.010 | **.934** | .126 | .070 | .015 | .158 |
| | Behaviour R&D | 2.05 | .063 | .118 | **.910** | .226 | .090 | -.248 | .107 |
| | Behaviour knowledge | 2.03 | .053 | .205 | **.900** | -.014 | -.017 | .219 | .124 |
| | Switching costs | 2.00 | .194 | .280 | **.699** | .214 | -.028 | **-.634** | -.266 |
| 4 | Differentiation | 2.76 | .078 | -.026 | .301 | **.960** | .075 | .218 | .017 |
| | Behaviour differentiation | 3.24 | .156 | .140 | .045 | **.950** | .220 | .037 | .060 |
| 5 | Distribution | 2.60 | .113 | .078 | .155 | .130 | **1.255** | .044 | .141 |
| 6 | Advertising | 2.72 | .306 | .259 | -.019 | .174 | -.027 | **.703** | -.108 |
| | Behaviour advertising | 2.21 | .255 | .419 | .134 | .354 | .009 | **.646** | -.035 |
| 7 | Government regulations | 2.42 | .348 | .151 | .278 | .088 | .139 | -.098 | **1.305** |
| | - Securing input | 1.54 | .293 | .206 | .432 | -.061 | .088 | .202 | -.122 |
| | - Economies of scale | 3.35 | .446 | .266 | .011 | .252 | .479 | -.326 | - .061 |
| | - Sales volume | 3.80 | .323 | .096 | -.032 | .153 | .316 | -.037 | - .006 |

* Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization.
First a factor analysis was carried out on 2/3 of the sample. The results were compared with a1/3 holdout sample. As the results were similar we ran a factor analysis on the entire dataset. In bold the factor loadings are given for the entry barriers included in the factors (factor loadings > .60).

## 6. A conjoint analysis to identify the most important entry barriers

As all barriers are generally present to a smaller or larger degree, it is preferred to measure the importance of a specific barrier in combination with the existence of other barriers. A full profile conjoint analysis is conducted to test the underlying dependence of the entry barriers. Conjoint analysis is commonly used in marketing research to analyse consumer trade-offs (Wittink & Cattin, 1989). The last decade conjoint analysis is also used as an analytical tool in managerial decision making (see e.g. Priem, 1992; Shepherd, 1999; Shepherd and Zacharakis, 2000; McDermoll, Lovatt & Koslow, 2004). In full profile conjoint analysis a set of hypothetical alternatives is constructed, and each alternative or profile stands for a combination of the distinguished attributes. Conjoint analysis is able to derive the importance of each attribute (relative weights) from the choices made, between the different profiles, by the respondents. The profiles are constructed in a systematic way by using a decomposition approach (Churchill, 1999).

In our conjoint analysis, respondents were asked to rank 10 profiles. As the number of 23 barriers (Section 4) is too large for respondents to fully evaluate the differences between the profiles, we used the seven identified underlying dimensions (Section 5) in the conjoint analysis[xii]. The barriers could have the value of high/difficult/strong/much versus low/easy/hardly/few (see also Karakaya & Stahl, 1989). For constructing the profiles we used a factorial design.

The conjoint analysis for the managers was introduced as if a friend was asking for advice to start a new business and the context of the business, a market profile, was characterised by the seven barriers. In Table 3 the relative importance of the seven barriers are presented. The results of the conjoint identify the most attractive market profiles and allow us to deduct the most vigorous entry barriers that influence entry decisions. Managers find finance by far the most important barrier, followed by access to distribution and strategic action of incumbents. Product differentiation is given the lowest value.

Table 3. The importance of the underlying dimensions (relative weights)

| | Manager/owner (n = 137) |
|---|---|
| Finance | 28.7 |
| Distribution | 21.7 |
| Strategic action | 19.0 |
| R&D | 13.5 |
| Advertising | 11.0 |
| Government regulation | 5.1 |
| Product differentiation | 1.0 |

The results of Tables 1 and 3 seem to be somewhat contradictory. Both tables confirm the importance of finance. However the role of strategic action and distribution is given more importance in Table 3 than in Table 1, while R&D, government regulation, advertising and product differentiation are getting lower scores. It is important to recall that the results in Table 1 are based on the question "is the specific barrier important in your market", whereas the results in Table 3 are based on the question "how attractive is the market profile in which the following set of market barriers exist". The differences between these questions explain the differences in results. Table 1 shows the importance of a specific barrier in the market in which the firm operates. The scores indicate that in most markets under study the importance of these barriers is not worrisome (generally average values below 3). In particular financial issues seem to play an important role in existing markets. This finding is getting extra significance in Table 3, which shows that manager/owners weigh this factor most in markets where these barriers are operational. Table 3 also shows that, although strategic action and distribution barriers are not really hampering the firms in their markets of operation, they would be perceived as a serious barrier to entry if they would exist. At the same time the results show that, even if government regulation and product differentiation would constrain the market operations, these barriers will barely influence entry decisions of newcomers to such a market.

## 7. Conclusions

In the debate on entry barriers some researchers stress the importance of one of the two strands of barriers. Table 3 does provide some support for the 'structuralists' (finance is a structural and important barrier), but also for the 'behaviourists'

(strategic action does matter). A factor analysis allowed us to identify the seven underlying dimensions that drive the system: finance, strategic action, R&D, product differentiation, distribution, advertising, government regulation. A striking result is that some structural and strategic barriers cohere: some barriers are rooted in the market structure but this seems to encourage firms to react strategically. The importance of knowledge, patenting and switching costs, may serve as an interesting example. Advertising and product differentiation provide similar examples where structural barriers induce strategic actions. We conclude that the effectiveness of strategic barriers depends on attributes of market structure.

Based on the seven generic factors, a conjoint analysis was carried out to identify the most important factors perceived by firms. The conjoint analysis shows that the barriers rooted in three underlying dimensions require attention of market authorities as they may refrain new entrants from entry to specific markets: finance, access to distribution channels and strategic action. Government regulations, product differentiation, R&D and advertising constitute a minor entry problem according to the firms.

The results show that in modern entrepreneurial economies market authorities should play an important role if specific markets are affected by significant entry barriers. Although entry barriers in existing markets in the perception of firms do not seem to be very important, it is acknowledged that some barriers may influence entry decisions. Consequently, entry barriers can reduce the amount of entrepreneurial activity and potential competition. Although it is not a general phenomenon in the Dutch economy at large it may constrain competitive forces in specific industries. Some authors explained that in the entrepreneurial economy less attention should be paid to regulation (Audretch and Thurik, 2001). They observe a trade off between ‘stimulation versus regulation’. Our findings rather suggest that both policies complement each other: ‘stimulation and regulation’ are instruments of policies that encourage entrepreneurial activity. In particular strategic action and distribution policies in specific sectors may require attention of market authorities. Financial barriers are most important in the perception of firms. The latter finding justifies a further study of the functioning of the financial market as it may constitute a general barrier for entrepreneurial activity.

Finally we recall that the importance of barriers is relatively low in the Dutch economy. This may be taken as a positive sign and as a support for the view that building an entrepreneurial attitude should be paid more attention by policy makers. The results are also in line with the conclusion of Geroski (1995): 'entry is easy but survival is not'. This indicates that policy should not focus all its attention on attitudes and start-ups but also give priority to maintenance: existing firms.

We conclude with some limitations of the study. Firstly, in Section 3 we discussed that only managers of existing companies have been interviewed. These managers are already active in the market and, therefore, may underestimate the importance of the barriers as discussed in Section 4 and 5. Ideally we should have interviewed persons who prepare their entry to the market on the basis of a feasible business plan. They are, however, difficult to identify and, therefore, our sample is considered as a second best solution. It is noted that this problem did not affect the results in Section 6. The conjoint analysis is based on a virtual market situation (profiles) in which prior experiences in a specific market are not explicitly taken into account. Secondly, the study is limited to a single country and pulls the data of a selected number of industries. Extension of the research to other countries would help to determine how far these results can be generalized. Finally, we only identified the perceived barriers. Studies that relate the perceived barriers to actual entry are needed. This would help to shed light on the extent to which the identified barriers really influence the entry process.

## Literature


Acs, Z. J., and D. J. Storey (2004), 'Introduction: Entrepreneurship and Economic Development, *Regional Studies,* Vol. 38, pp. 871–877.

Aidis, R. (2005), 'Institutional Barriers to Small- and Medium-Sized Enterprise Operations in Transition Countries', *Small Business Economics,* Vol. 25, pp. 305-318.

Audretch, D. B. (2006), *Entrepreneurship, Innovation and Economic Growth,* Edward Elgar, Cheltenham.

Audretch, D. B. and R. Thurik (2001), What's new about the new economy? Sources of growth in the managed and entrepreneurial economies, *Industrial and Corporate Change*, pp. 267-315.

Bain, J. S., (1956), *Barriers to New Competition*, Harvard University Press: Cambridge, MA.

Barney, J.B. (1991), Firm resources and sustained competitive advantage*, Journal of Management*, March, pp. 99-120.

Blees, J., R.G.M. Kemp, J. Maas, and M. Mosselman (2003), *Barriers to entry. Differences in barriers to entry for SME's and large enterprises*, EIM Research Report H200301, the Netherlands.

Baumol, W.J., J. Panzar and R.D. Willig (1982), *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich: New York, NY.

Besanko, D., D. Dranove, M. Shanley, S. Schaefer (2007), *Economics of Strategy,* Wiley, UK.

Bunch, D.S. and R. Smiley (1992), Who deters entry? *Evidence* on the use of strategic entry deterrents, *Review of Economics and Statistics*, Vol. 74 (3), pp. 509-521.

Cabral, L.M.B. (2000), *Introduction to industrial organisation*, The MIT Press: London.

Churchill, G.A. (1999), *Marketing research: Methodological foundations*, Dryden Press, Orlando, Florida, USA.

Davidsson, P. (1991), Continued Entrepreneurship: Ability, Need, and Opportunity as determinants of Small Firm Growth, *Journal of Business Venturing,* Vol. 6, pp. 405-429.

Daems, H., and S.W. Douma (1985), *Concurrentie: Analyse en strategie*, Kluwer: Deventer.

Demsetz, H. (1982), Barriers to Entry, *American Economic Review*, Vol. 72 (1), pp. 47-57.

Dixit, A. (1980), The Role of Investment in Entry-Deterrence, *Economic Journal*, Vol. 90 (357), pp. 95-106.

Dixit, A.K., and A.S. Kyle (1985), The Use of Protection and Subsidies for Entry Promotion and Deterrence, *American Economic Review*, Vol. 75, (1), pp. 139-152.

Dollinger, M. J., (2003), *Entrepreneurship, Strategies and Resources,* Prentice Hall, Upper Saddle River, New Jersey.

Fava, J.L. and W.F. Velicir (1996), The effects of underextraction in factor and component analysis, *Educational and Psychological Measurement*, vol. 56, pp. 907-929.

Gatignon, H., T.S. Robbertson and A.J. Fein (1997), Incumbent defence strategies against new product entry, *International Journal of Research in Marketing*, Vol. 14, pp. 163-176.

Geroski, P.A., R.J. Gilbert and A. Jacquemin (1990), *Barriers to Entry and Strategic Competition, Fundamentals of Pure and Applied Economics 41*, Harwood Academic Publishers GmbH: Chur.

Geroski, P.A. (1995), What do we know about entry? *International Journal of Industrial Organization,* Vol 13, pp 421-440.

Han, J.K., N. Kim and H.B. Kim (2001), Entry Barriers: A dull-, one- or two-edged sword for incumbents? Unravelling the paradox from a contingency perspective, *Journal of Marketing*, Vol. 65, no. January, pp. 1-14.

Harrigan, K.R. (1981), Barriers to entry and competitive strategies, *Strategic Management Journal*, Vol. 2 (4), pp. 395-412.

Harrigan, K.R. (1983), Entry barriers in mature manufacturing industries, *Advances in Strategic Management*, Vol. 2, pp. 67-97.

Horn, J.L. (1965), A rationale and test for the number of factors in factor analysis, *Psychometrika*, vol. 30, pp. 179–186.

Karakaya, F. and M.J. Stahl (1989), Barriers to entry and market entry decisions in consumer and industrial goods markets, *Journal of Marketing*, Vol. 53, pp. 80-91.

Karakaya, F. (2002), Barriers to entry in industrial markets, *Journal of Business & Industrial Marketing*, Vol. 17 (5), pp. 379-388.

Kemp, R.G.M., and C. Lutz (2006), Perceived barriers to entry: are there any differences between small, medium-sized and large companies?, *International Journal of Entrepreneurship and Small Business,* Vol. 3 (5), pp. 538-553.

Klemperer, P. (1987), Entry Deterrence in Markets with Consumer-switching costs, *Economic Journal*, Vol. 97, pp. 99-117.

Klemperer, P. (1992), *Competition When Consumers Have Switching Costs: An Overview*, CEPR Discussion Paper Series 704.

Lieberman, M.B. (1987), Excess Capacity as a Barrier to Entry: an Empirical Appraisal, *Journal of Industrial Economics*, Vol. 4, pp. 607-627.

Martin, S. (2002), *Advanced Industrial Economics*, Blackwell Publishers: Malden, MA.

McAfee, R. P., H. M. Mialon, M. A. Williams (2004), What is a barrier to entry?, *American Economic Review,* Vol 94 (2), pp. 461-465.

McDermoll, A., S.J. Lovatt, and S. Koslow (2004), Supply chain performance measures for producers and processors of premium beef cuts: A conjoint approach, *Journal of Chain and Network Science*, Vol. 44 (1), pp. 33-43.

Milgrom, P., and J. Roberts (1982), Limit-pricing and Entry under Incomplete Information: An Equilibrium Analysis, *Econometrica*, vol. 50, no. 2, pp. 443-460.

Netter, J.M. (1983), Political competition and advertising as a barrier to entry, *Southern Economic Journal,* Vol. 50, no. October, pp. 510-520.

OECD, 2005, Barriers to Entry, *DAF/COMP(2005)42*, Directorate for Financial and Enterprise Affairs, Competition Committee, Paris.

Porter, M.E. (1980), *Competitive Strategy*, The Free Press, NY.

Porter, M.E. (1985*), Competitive advantage: Creating and sustaining superior performance*, The Free Press, NY.

Priem, R.L. (1992), An application of metric conjoint analysis for the evaluation of top managers' individual strategic desision makingprocesses: A research note, *Strategic Management Journal*, vol. 13, pp. 143-151.

Rangone, A. (1999), A Resource-Based Approach to Strategy Analysis in Small-Medium Sized Enterprises, *Small Business Economics,* Vol. 12, pp. 233 – 248.

Robinson, K.C., P. Philips McDougall (2001), Entry barriers and new venture performance: A comparison of universal and contingency approaches, *Strategic Management Journal*, Vol. 22, pp. 659-685.

Scherer, F.M. (1970), *Industrial pricing: Theory and evidence*, Rand McNally College Publishing Company: Chicago, IL.

Scherer, F.M. (1988), Review of the Economics of Market Dominance, *International Journal of Industrial Organization,* Vol. 6, pp. 517 –519.

Schmalensee, R. (1978), Entry deterrence in the ready-to-eat breakfast cereal industry, *The Bell Journal of Economics*, Vol. 9 (2), pages 305-327.

Schmalensee, R. (1981), Economies of Scale and Barriers to Entry, *Journal of Political Economy*, Vol. 89 (6), pp. 1228-1238.

Schmalensee, R. (1982), Product differentiation advantages of pioneering brands, *American Economic Review*, Vol. 72 (3), pp. 350-371.

Schmalensee, R. (1983), Advertising and Entry Deterrence: An exploratory model, *Journal of Political Economy*, Vol. 91 (4), pp. 636-653.

Shepherd, D.A. (1999), Venture capitalist' assessment of new venture survival, *Management Science*, Vol. 45 (5), pp. 621-632.

Shepherd, D.A., and A. Zacharakis (2000), Structuring family business succession: An analysis of the future leader's decision making, *Entrepreneurship: Theory and Practice*, Vol 24 (4), pp. 25-39.

Shepherd, W.G. (1997), *The economics of industrial organisation*, Prentice-Hall International: Upper Saddle River, NJ.

Shy, O. (2002), A quick-and-easy method for estimating switching costs, *International Journal of Industrial Organization*, Vol. 20, pp. 71-87.

Singh, S., M. Utton and M. Waterson (1998), Strategic behaviour of incumbent firms in the UK, *International Journal of Industrial Organization*, Vol. 16, pp. 229-251.

Smiley, R., (1988),. Empirical evidence on strategic entry deterrence, *International Journal of Industrial Organization*, Vol. 6, pp. 167-180.

Spence, A.M. (1977), Entry, Capacity, Investment and Oligopolistic Pricing, *Bell Journal of Economics*, Vol. 8 (2), pp. 534-544.

Spence, A.M. (1980), Notes on Advertising, Economies of Scale and Entry barriers, *Quarterly Journal of Economics*, no. November, pp. 493-507.

Stigler, G., (1968), *The Organization of Industry*, University of Chicago Press: Chicago, IL.

Sutton, J. (1991), *Sunk costs and market structure: Price competition, advertising, and the evolution of concentration*, MIT Press, Cambridge, MA.

Thomas, L.A. (1999), Incumbent firms' response to entry: Price, advertising and new product introduction, *International Journal of Industrial Organization*, Vol. 17, pp. 527-555.

Van Stel, A., Carree, M., and Thurik, R., (2005), The Effect of Entrepreneurial Activity on National Economic Growth, *Small Business Economics,* Vol. 24, 311-321

Von Weizsacker, C.C., (1980), A Welfare Analysis of Barriers to Entry, *Bell Journal of Economics*, Vol. 11(2), pp. 399-420.

Wittink, D.R., and P. Cattin (1989), Commercial use of conjoint analysis: an update, *Journal of Marketing*, Vol. 53, pp. 91-96.

Yip, G.S., (1982), *Barriers to entry: a corporate perspective*, Lexicon Books: Lexicon, MA.

Annex 1: Entry Barriers derived from the literature survey and addressed in the survey

| *Type of barrier* | *Barrier to entry** | *Source* |
|---|---|---|
| Structural | Access to distribution (13) | Porter 1980; Yip 1982; Karakaya & Stahl 1989; Han et al. 2001 |
| | Access to knowledge / patents (3) | Yip 1982; Harrigan 1983; Karakaya & Stahl 1989; Shepherd 1997 |
| | Advertising (14) | Spence 1980; Harrigan 1981; Yip 1982; Netter 1983; Schmalensee 1983; Karakaya & Stahl 1989 |
| | Capital requirements (22) | Bain 1956; Porter 1980; Harrigan 1981; Yip 1982; Karakaya & Stahl 1989; Shepherd 1997 |
| | Sales volume (23) | Yip 1982 |
| | Cost disadvantages of newcomers (19) | Bain 1956; Scherer 1970; Yip 1982; Karakaya & Stahl 1989; Geroski et al. 1990; Han et al. 2001 |
| | Costs of capital / special risks and uncertainties (18) | Demsetz 1982; Shepherd 1997 |
| | Customer switching costs (7) | Porter 1980; Klemperer 1987, 1992; Karakaya & Stahl 1989; Shepherd 1997; Shy 2002 |
| | Differentiation (16) | Bain 1956; Porter 1980; Schmalensee 1982; Karakaya & Stahl 1989; Shepherd 1997; Martin 2002 |
| | Economies of scale (17) | Bain 1956; Dixit, 1980; Scherer 1970; Spence 1980; Harrigan 1981; Schmalensee 1981; Yip 1982; Geroski et al. 1990; |
| | Government regulations (12) | Porter 1980; Dixit & Kyle 1985; Karakaya & Stahl 1989; Shepherd 1997 |
| | Financial risk/sunk costs (21) | Bain 1956; Porter 1980; Baumol et al. 1982; Geroski et al. 1990; Sutton 1991; Sheperd 1997 |
| Strategic | Limit pricing (6) | Bain 1956; Milgrom & Roberts 1982; Geroski et al. 1990; Bunch & Smiley 1992; Singh et al. 1998 |
| | Masking profit / gaps and asymmetric information (8) | Milgrom & Roberts 1982; Geroski et al. 1990; Bunch & Smiley 1992 |
| | Retaliation (4) | Scherer 1970; Yip 1982; Karakaya & Stahl 1989; Bunch & Smiley 1992; Gatignon et al. 1997; Shepherd 1997; Thomas 1999 |
| | Collusion (2) | Singh et al. 1998 |
| | Excess capacity (15) | Spence 1977; Dixit 1980; Harrigan 1983; Lieberman 1987; Bunch & Smiley 1992; Shepherd 1997; Singh et al. 1998 |
| | Securing input / control over strategic resources (1) | Scherer 1970; Yip 1982; Karakaya & Stahl 1989; Shepherd 1997; Singh et al. 1998; Cabral 2000 |
| | Strategic behaviour advertising (10) | Bunch &Smiley 1992; Singh et al. 1998 |
| | Strategic behaviour differentiation / packing the product space (20) | Schmalensee 1978; Bunch & Smiley 1992; Shepherd 1997; Cabral 2000 |
| | Strategic behaviour distribution channels (11) | Singh et al. 1998 |
| | Strategic behaviour knowledge / pre-emptive patents (5) | Bunch & Smiley 1992; Singh et al. 1998 |
| | Strategic behaviour R&D (9) | Harrigan 1981; Yip 1982; Daems & Douma 1985; Bunch & Smiley 1992; Singh et al. 1998 |

* the numbers in brackets refer to the barriers presented in Table 1

Endnotes:

[i] These are the views of the authors and need not reflect those of EIM or the NMa. We would like to thank all students who participated in the fieldwork and the course 'Small Business Economics'. Their reports, enthusiasm and critical comments were highly appreciated.

[ii] The reply options were: not at all, nearly not, somewhat, to a large extent, to a very large extent (or alternatively: strongly disagree, disagree, not agree / not disagree, agree, strongly agree).

[iii] Even the group of new and potential competitors can be considered as too broad. For the research information from the 'marginal entrant' is needed. This marginal firm is indeed difficult to identify.

[iv] A telephone survey was preferred for the following reasons: generally these surveys have a higher response rate and result in a more complete data set (fewer missing values), less time is needed for data collection and more control over the stratified sample is possible during the data collection process.
[v] In total 209 firms belong to the furniture sector, 204 to the employment agency sector, 174 to the chemical industry, 215 to the ICT sector, 157 to the food sector, 193 to the retail sector.

[vi] It could be argued that students are not very experienced interviewers. However, we believe that their results are reliable as this group was intensively supervised by the researchers. For most barriers, no significant differences were found between the data from the telephonic interview and the students' interviews. Therefore, pooling the data is admissible.

[vii] The SBI-code of the Chamber of Commerce for the industries were 361 (furniture), 74501 (employment agencies), 24 excluding 241 (chemical industry), 721 and 722 (ICT), 158 (food, production of bread) and 5242 and 5243 (retail, clothing and shoes).

[viii] The database is based on information on business registrations by the Chambers of Commerce, address information by TNT Post and checks by MarketSelect.

[ix] The scores have the same range as previous research, see e.g. Smiley (1988) and Karakaya (2002).

[x] Interestingly, the results are quite robust if the number of factors is reduced to 6 or 5. The first 5 factors are identified in all these models and in general the same variables are getting high factor loadings. The advertising barriers are identified in a separate factor in the 6 factor model while these variables get a relatively high factor loading in the capital and strategic action factor if a 5 factor model is estimated. In the 5 and 6 factor model government regulation gets a high loading in the factor access to distribution channels. The advantage of the 7 factor model is that it leads to an unambiguous interpretation. It allows for a distinctive role of advertising. The same applies for government regulation. In the other models it would be difficult to interpret its meaning in connection with access to distribution channels.

[xi] First a factor analysis was carried out on 2/3 of the sample. The results were compared with a 1/3 holdout sample. As the results were similar we ran a factor analysis on the entire dataset.
[xii] For example, one of the profiles consisted of the following market characteristics: (1) high expenditures on advertisement are necessary, (2) it is difficult to access distribution channels or customers, (3) much capital is needed for entry, (4) few government entry regulations apply, (5) hardly any product differentiation exists, (6) high expenditures for R&D are needed, (7) incumbents hardly react to entry.